UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,717	01/11/2001	Enrico Di Bernardo	40736/RAG/D465	9531

23363 7590 01/16/2004

CHRISTIE, PARKER & HALE, LLP
350 WEST COLORADO BOULEVARD
SUITE 500
PASADENA, CA 91105

EXAMINER	
PATEL, KANJIBHAI B	
ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 01/16/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/758,717	BERNARDO ET AL.	
	Examiner	Art Unit	
	Kanji Patel	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-85* is/are pending in the application.

4a) Of the above claim(s) *32-44 and 68-80* is/are withdrawn from consideration.

5)☒ Claim(s) *81-85* is/are allowed.

6)☒ Claim(s) *1,2,4-9,14-22,27-31,45-50,55-59 and 64-67* is/are rejected.

7)☒ Claim(s) *3,10-13,23-26,51-54,60-63* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Applicant's election without traverse of claims 1-31, 45-67 and 81-85 in Paper No. 6 is acknowledged.

Drawings

2. Drawings filed on 6/11/01 have been approved by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-9, 14-22, 27, 45-50, 55-59 and 64 are rejected under 35 USC 102 (e) as being anticipated by Endo et al. (US 6,335,754 B1).

For claims 1, 4 and 45, Endo discloses a method for creating a composite image of at least one object (Fig. 3), the method comprising:

recording a plurality of images of the object (column 8, lines 1-19) using an image recording device (Fig. 4; 22a-22g; HD) moving along a path;

obtaining position information (column 8, lines 1 –66) of the image recording device as the image recording device moves along the path;

associating the positron information with the plurality of images (column 8, lines 1-66); and

processing image data acquired from the plurality of images to create a composite image representing the object (column 13 line 6 to column 14 line 16).

For claims 2, 5, 22, 47 and 59, Endo discloses the method wherein the object is located on a first side of the path (in figure 8, cameras 1 and 2 are located on left or first side of the vehicle or object) and the composite image simulates a view of the object from a particular location on a second side of the path (cameras 5 and 6 are located on right side or second side of the vehicle or object) opposite from the first side.

For claims 6,18 and 49, Endo discloses the method wherein the obtaining of position information comprises obtaining Global positioning System (GPS) data (40 in fig. 3 is a GPS system).

For claims 7, 19 and 48, Endo discloses the method the method wherein the obtaining of position information comprises: obtaining acceleration information (in figure 3, 40-42 provide an acceleration information to determine the position information) of the image recording device as the image recording device moves along the path; and deriving the position information (column 8, lines 1-66) from the acceleration information.

For claims 8 and 20, Endo discloses the method the method wherein the obtaining of position information comprises deriving the position information of the image recording device at a particular time (column 8, lines 1-66; time code provides a particular time) by computing a motion of objects in a plurality of images closest to the particular time.

For claims 9, 21, 50 and 58, Endo discloses the method wherein the associating of the position information comprises correlating times associated with the position information to times of acquisition of the plurality of images (column 8, lines 1-66).

For claims 14, 27, 55 and 64, Endo discloses the method wherein the image data comprises a set of pixel values (column 1, lines 35-40; column 13, lines 11-57; image data points read on pixel values).

For claims 15, 17, 46 and 57, Endo discloses the method wherein the recording of the images comprises recording the images from multiple viewing directions using multiple image recording devices (see figures 8,14, 27-34).

For claim 16 and 56, at least see the rejection of claim1 above. The generation of database is fully explained by Endo at least in column 11 line 30 to column 13 line 5.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 28-31 and 65-67 are rejected under 35 USC 103(a) as being unpatentable over Endo et al. (US 6,335,754 B1, hereinafter, Endo) as applied to claim 1 above and further in view of Chojnacki et al. (US 6,674,434 B1, hereinafter, Chojnacki).

For claims 28 and 65, Endo differs from these claims in that he does not clearly disclose the partitioning of the path into a plurality of discrete segments comprises: detecting an intersection on the path; and identifying the position of the intersection.

Chojnacki in an analogous art discloses a method and system for automatic generation of shape and curvature data for a geographic database comprising the partitioning of the path into a plurality of discrete segments comprises: detecting an intersection on the path and identifying the position of the intersection (column 7, lines 13-43). Therefore it would have been obvious to one of ordinary skill in the art to modify the system of Endo by incorporating partitioning of the path into a plurality of discrete segments comprises: detecting an intersection on the path and identifying the position of the intersection. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Endo by the teaching of Chojnacki for the purpose of collecting data about roads located in a geographic area and using the collected data to develop representations of the positions and geometry of the roads for a geographic database as shown by Chojnacki in column 2 line 66 to column 3 line 3.

For claim 29, Endo does not clearly disclose detecting of the intersection comprises detecting a point of maximum curvature on the path. Chojnacki in an analogous art discloses a method and system for automatic generation of shape and

curvature data for a geographic database comprising detecting of the intersection comprises detecting a point of maximum curvature on the path (figures 3-6; column 7, lines 13-59). It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Endo by the teaching of Chojnacki for the purpose of collecting data about roads located in a geographic area and using the collected data to develop representations of the positions and geometry of the roads for a geographic database as shown by Chojnacki in column 2 line 66 to column 3 line 3.

For claims 30-31 and 66-67, Endo does not clearly disclose that each discrete segment is associated with a plurality of composite images, each composites image depicting a portion of the associated segment and wherein each discrete segments a portion of a street and the method further comprises associating each discrete segment with a street name and number range.

Chojnacki in an analogous art discloses a method and system for automatic generation of shape and curvature data for a geographic database comprising each discrete segment is associated with a plurality of composite images, each composites image depicting a portion of the associated segment and wherein each discrete segments a portion of a street 9column 4, lines 45-55; column 9, lines 63-66) and the method further comprises associating each discrete segment with a street name and number range (column 7, lines 13-43). Therefore it would have been obvious to one of ordinary skill in the art to modify the system of Endo by incorporating each discrete segment is associated with a plurality of composite images, each composites image depicting a portion of the associated segment and wherein each discrete segments a

portion of a street and the method further comprises associating each discrete segment with a street name and number range. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Endo by the teaching of Chojnacki for the purpose of collecting data about roads located in a geographic area and using the collected data to develop representations of the positions and geometry of the roads for a geographic database as shown by Chojnacki in column 2 line 66 to column 3 line 3.

Allowable Subject Matter

5. **Claims 3,10-13, 23-26, 51-54, 60-63** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 81-85 are allowed.

For claims 3, 10, 23, 51, 60 and 81, the prior art on record fails to teach or suggest, alone or in combination, identifying a plurality of optical rays originating from the particular location, selecting for each optical ray an image including a corresponding optical ray originating from a position on the path, extracting image data for the corresponding optical ray from the selected images, combining the extracted image data to form the composite image.

For claims 11-13, 24-26, 52-54,61-63, since these claims depend upon objected base claims 10, 23, 51 and 60, therefore they are objected for the same reasons.

Other prior art cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hayashi et al. (US 6,035,253) disclose a navigation apparatus for a vehicle and recording medium for use in the same.

Cheng et al. (US 6,356,297 B1) disclose a method and apparatus for displaying panoramas with streaming video.

Gullichsen et al. (US 6,005,611) disclose a wide angle image dewarping method and apparatus.

Gorr et al. (US 5,961,571) disclose a method and apparatus for automatically tracking the location of vehicles.

Chen (US 6,552,744 B2) discloses a virtual reality camera.

League et al. (US 5,668,739) disclose a system and method for tracking objects using a detection system.

Contact information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kanji Patel** whose telephone number is (703) 305-4011. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 6:30 p.m. Friday off.

If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, **Bhavesh Mehta**, can be reached on (703) 308-5246.

Any inquiry of general nature or relating to the status of this application should be directed to the **Group receptionist** whose telephone number is (703) 305-3800.

The **Fax number** for this group is (703) 872-9306.

Kanji Patel
Patent Examiner
Group Art Unit2625
January 10, 2004